

Claims

- [c1] An autonomously movable home cleaning robot comprising:
- a base housing;
 - a drive system mounted to said base housing, said drive system adapted to autonomously move said base housing on a substantially horizontal surface having boundaries;
 - a computer processing unit for storing, receiving and transmitting data, said computer processing unit associated with said base housing;
 - a sweeper aperture and a rotary driven brush mounted for rotation in the sweeper aperture for removing debris particles from the surface;
 - a dust bin in communication with the sweeper aperture for receiving the debris particles removed from the surface;
 - a power source connected to said drive system and said computer processing unit whereby said computer processing unit directs horizontal movement of said base housing within the boundaries of the surface to be cleaned based upon input data defining said boundaries;
 - and

a dusting assembly for removing dust from the surface to be cleaned and mounted to an underside of the base housing for removing dust from the floor.

- [c2] An autonomously movable home cleaning robot according to claim 1 wherein the dusting assembly comprises a dusting pad for supporting the dusting cloth against the surface to be cleaned and removably mounting a dusting cloth and mounted to the base housing for movement away from the base housing for service of the dusting cloth.
- [c3] An autonomously movable home cleaning robot according to claim 2 wherein the dusting pad is removably mounted to the base housing.
- [c4] An autonomously movable home cleaning robot according to claim 2 wherein the dusting pad is hinged to the base housing for selectively pivoting the dusting pad between a first, opened position away from the underside of the base housing for removal and mounting of the dusting cloth to the dusting pad and a second, closed position in operative position with the base housing.
- [c5] An autonomously movable home cleaning robot according to claim 2 and further comprising at least one dusting cloth engagement member mounted to an upper

surface of the dusting pad for retaining a first portion of the dusting cloth.

- [c6] An autonomously movable home cleaning robot according to claim 5 and further comprising at least one second dusting cloth engagement member mounted to an upper portion of the base housing for retaining a second portion of the dusting cloth, whereby the dusting cloth is positioned over a second, lower pad surface to remove dust from the surface as the base housing is maneuvered over the surface.
- [c7] An autonomously movable home cleaning robot according to claim 6 wherein the dusting pad is at least partially resilient.
- [c8] An autonomously movable home cleaning robot according to claim 6 wherein there are at least two second cloth engagement members.
- [c9] An autonomously movable home cleaning robot according to claim 5 wherein there are at least two first cloth engagement members.
- [c10] An autonomously movable home cleaning robot according to claim 1 wherein the dust bin is removably mounted to the base housing.

- [c11] An autonomously movable home cleaning robot according to claim 10 wherein the dust bin is removable from the bottom of the base housing.
- [c12] An autonomously movable home cleaning robot according to claim 10 wherein the dust bin is removed from the top of the base housing.
- [c13] An autonomously movable home cleaning robot according to claim 1 wherein the base member is programmed to move in a predetermined direction, and the sweeper assembly is positioned generally forwardly in the predetermined direction with respect to the dusting assembly in the base housing.